

**ADAPTATION BEYOND AN IDEAL, A SCULPTURAL
ENQUIRY.**

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Master of Fine Art.**

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Signed statement of originality

This Thesis contains no material, which has been accepted, for a degree or diploma by the University or any other institution. To the best of my knowledge and belief, it incorporates no material previously published or written by another person except where due acknowledgement is made in the text.

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Abstract

To survive and travel within environments that do not accommodate the body, humans have designed tools that allow for adaptation.

Through sculptural processes I have investigated the idea that humans construct various aspects of the external world based on a reflected understanding of the internal workings of the human body and its limitations. By drawing on forms such as the lifeboat, sleeping bag, hammock and aeronautical equipment, together with utilising my own dimensions as a design tool I have created a group of non-representational sculptures. It is my intention to explore how these sculptures can evoke possible shelters, adaptive vehicles and imaginary human carapaces. Conceptually this process alludes to structures and vehicles that transport the occupant beyond an imaginary set of physiological confinements.

Various industrial materials such as rubber, timber, steel and fabric have been utilised, their inherent qualities contributing to design choices made within the construction process. I have investigated materials and construction techniques that reveal the making process, and present form and surface as problems to be resolved on an equal footing. A significant aspect of the project is the contribution made to the content of the work by time intensive methods of labour, together with specific material choices. Collectively the works share aspects of construction in that a skeletal framework configures each piece: cladding or exposure of this framework varying with each sculpture.

Within the project I have researched the work of Lucy Orta, Antony Gormley and Martin Puryear to inform my research about shelter, dimensional design and formal concerns regarding material use and form.

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CHAPTER ONE

ADAPTATION

This research centres on the construction of sculptures that utilise my physical dimensions as a design tool for investigation of and response to the idea of human adaptation to an environment. By this I mean a physiological adaptation to environment, via various devices, and not alteration of any particular environment to suit our needs. This adaptation is in the form of protection or extension of the capabilities of the human body. Since the problem is posed through the construction of sculpture it has been investigated through various processes employed in the practice of object making. This is an important element of the research alongside the utilisation of various materials to create the objects made within the project. Sculptural concerns also centre on a process-orientated inquiry into the relationship between the surface and form of objects. The project investigates materials and construction techniques that reveal the making process and present form and surface as equal problems to be resolved when making objects. The outcome is a group of sculptures that in exhibition contain the original discourse of the project.

TENT BOUND

I first came to Tasmania in 1995, having journeyed here to go on a walk to Precipitous Bluff in the South West of the state. I saw my walks then as creating a space for imagination, not as a direct source of inspiration. It was December; hot where I was coming from but having heard of the Roaring Forties I had some idea of what to expect of the unpredictable weather. With me I carried my stove, tent and sleeping bag, amongst other bits and pieces. These devices of adaptation would allow me to move beyond the four walls of my daily life, hopefully keeping me alive where otherwise I could perish.

On the sixth day of the walk I became tent bound for nineteen hours during a ferocious blizzard. I lay there in my sleeping bag watching the walls of the tent being pushed to the ground by the force of the wind outside. I realised my body weight was an anchor keeping the tent earthbound. Caught in a moment of

twentieth century “artist as hero” delusion I thought of Joseph Beuys, having survived the crash of his fighter plane, being wrapped in fat and felt. I was also protected from an environmental situation that I would not have survived but for the nylon, aluminium and goose down that encased my body, cocooning me from the outside. Eventually the storm blew out and I continued on my way.

CLOTHING and SHELTER

Prior to the advent of agriculture and domestication of animals at the end of the last Ice Age humans had led a more nomadic life. Moveability means portability and possessions consisted of food, weapons, children and clothing. The amount of clothing people wore depended on their geographical situation. If it was cold some sort of insulation was required to protect the body. To insulate effectively a layering of materials or surfaces around the body is the most successful method of trapping heat next to the skin. Animal skins initially supplied this form of insulation, and then about ten thousand years ago the advent of crops such as cotton enlarged the collective wardrobe.¹ A few giant steps forward to the use of fossil fuels led to the development of plastics being modified to make fibre pile garments, the petro-chemical equivalent of ‘the wool off the sheep’s back.’ However the reliance on animal insulation is still part of our toolbox of adaptation, the goose down that fills my sleeping bag being a case in point. The ability to maintain warmth next to the skin is one human need, shelter from the extremes of the environment another.

When the environment has dictated the need, humans have sought shelter, finding it in the natural world in caves, under rock overhangs and within the cover of vegetation. The raw materials of nature have also been used to construct shelter, some long standing such as the Medieval castles of Europe, others as fleeting or seasonally affected as an igloo or the branch of a tree. At times the weather was not the only thing to be kept out so large ramparts or natural earth barriers were constructed, these later being reduced to a lock and spindle in a door.

¹ Jared Diamond; *Rise and Fall of the Third Chimpanzee*, 1992, p.166.

The advance of technology at an unprecedented rate has accelerated movement around the planet for people as never before, allowing us to live in places we are not physiologically pre-disposed to encounter. No more is life limited to the rise of the next hill or the edge of that shark infested bay you inhabit. Prior to the explosions of the twentieth century and the mass migrations that ensued, people were more physiologically adapted to their particular environments. Occurring over millennia this form of evolutionary/physiological adaptation proceeds far more slowly for people than that of a cultural or technological adjustment.² It hasn't taken me too long to adapt to the new eMac interface, but no matter how long I stand out in the sun, I will not grow a visor on my forehead. In 1847 German biologist Carl Bergmann formulated rules concerning the relationship of a person's size and shape to the place they called home.³ Initially his study was with animals. Bergmann observed that larger animals, such as the polar bear have smaller surface areas relative to their body mass. This enables them to contain internally produced heat more efficiently. In addition to fur and fat a small surface area combined with a large internal mass results in less heat being lost to the environment. In 1847 Bergmann's rule held up pretty well for humans also. There were a lot of thin people with little body mass located near the equator and stockier physiques once higher altitudes or the northern hemisphere were encountered. In 1877 an American physician and surgeon, Joel Allen extended Bergmann's ideas of bodily adaptation.⁴ Allen observed that the length of our arms, legs, hands and neck have an effect on body heat lost to the environment. Limbs tended to be longer near the equator than in colder climates. So why have I ended up shivering in Tasmania? The natural environment and the ability to walk within it brought me here but unfortunately my body type is not well adapted to this part of the world. A

² Adaptation. (1) Evolutionary. Some property of an organism is normally regarded as an adaptation (i.e. fits the organism in its environment) (2) Physiological. A change in an organism, resulting from exposure to certain environmental conditions, allowing it to respond more effectively to them.

Abercrombie, Hickman, Johnson, Thain; *Dictionary of Biology*, 1990, p.8.

³ Carl Bergmann; http://anthro.palomar.edu/adapt/adapt_2.htm

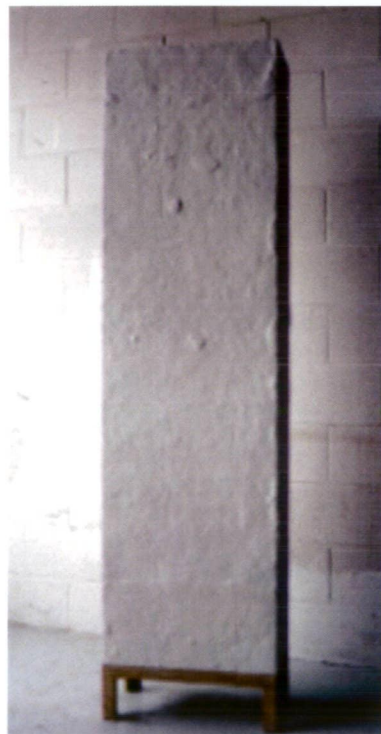
⁴ Joel Allen; http://anthro.palomar.edu/adapt/adapt_2.htm

skinny body with long limbs has a larger surface area enabling body heat to escape, an optimal shape in the hotter regions of the world, where I grew up.

SIZE MATTERS.

As a child I would lie in bed at night, eyes closed, visualising my physical form shrunk down until I was a miniature me resting on the pillow. This sensation was complete, going beyond a perception or trick of the mind to a complete physical awareness, only broken once I opened my eyes.

The use of my own physical dimensions to construct objects began during my Honours year in 2001 with the creation of an object titled *Average Lot*, 2001 [Plate 1].



[Plate1]

This rectangular salt encrusted form has the dimensions 1900 by 500 by 240mm, my height, width and depth. At that time it was important to have some rules, natural boundaries to work with and within. These dimensions

became a design tool for constructing further objects within that research and on into the Masters investigation.

In *Techniques of the Body*, Marcel Mauss discusses the idea of the body being a tool or technical instrument. Mauss writes:

In this case all that need be said is quite simply that we are dealing with techniques of the body. The body is man's first and most natural instrument. Or more accurately, not to speak of instruments, man's first and most natural technical object, and at the same time technical means, is his body.⁵

This was the start of using my dimensions to design the objects I wanted to construct, albeit in a very literal way. But I could only reach so far, my fingers stretching at the air, trying to extend out beyond myself, never able to escape the prototype of my membrane. As the studio practice progressed I began to avoid this straightforward use of dimension as it became limiting when planning the scale of objects. I began to use a subjective dimensional form of measurement, retaining only one or two dimensions rather than all three being used together. With the removal of this dimensional limitation I developed the idea of extending my physical form beyond its extremities out into space. I could now travel to the edge of my outstretched fingertips and beyond. This enabled a boundless limitation of scale within the design process. As long as one of the dimensions was adhered to there were no limits. I sought to avoid the monumental and due to my tall stature it was unlikely that the miniature would be relevant.

⁵ Marcel Mauss; *Sociology and Psychology: Essays*, 1979, p 104.



[Plate 2]

The construction of *Shell*, 2001 [Plate 2] was based on the idea of the body falling through space. This object was an indication of my body's actions and an extension beyond its dimensional constraints. I was learning to adapt my dimensions to make abstracted objects that plotted my body and its various movements within space.

CHAPTER TWO

RELATED ART PRACTICE

To further expand my ideas about the construction of objects based on the interaction with and observation of the world around me I investigated the style and approach of three contemporary sculptors. This discussion includes the use of bodily dimensions as a design tool and the role that shelter plays in human adaptation to the environment.

To adapt is to thrive. To remain unprotected is to suffer. We need shelter to rest, allowing time to precipitate the formulation of ideas. The advent of organised agriculture after the last Ice Age replaced the hunter-gatherer existence

and helped amongst other things to create the class divisions that exist in society. In *Rise and Fall of the Third Chimpanzee*, Jared Diamond's book on the progression of the human species, he discusses the causality of this outcome:

Hunter-gatherers have little or no stored food...Everybody except infants, the sick, and the old joins in the search for food. Thus there can be no kings, no full time professionals, and no class of parasites who grow fat on food seized from others.⁶

For those who did not work as hard anymore there were others not so fortunate who worked longer to make up the labour discrepancy. Growing crops also brought increased population as a result of more consistent and higher food production.⁷ More mouths to feed required the planting of more crops. Now due to technology, fewer people farm larger areas in what is progressively a monocultural world. Agriculture, language, an opposable thumb and a few other giant leaps forward have delivered us to our particular form of civilization.

LUCY ORTA-Gimme Shelter.

Lucy Orta creates mobile clothes that become shelter devices. They protect the occupant from the urban and economic pitfalls of the modern society. Orta's work represents accessible protection for the user. It is of the body and the taking care of it. It does not require the wearer to stand in line fortnightly, or go to a mutual obligation seminar on how to answer a phone. Orta's survival wear has existed as street theatre and objects within the gallery space.⁸ Orta's situational street performances are temporary in nature. They are portable, following the plight of refugees, human movement and the demands of

⁶ Jared Diamond; *The Rise and fall of the Third Chimpanzee*, 1992, p.169.

⁷ "The progressivist party line goes further and credits agriculture with giving rise to art, the noblest flowering of the human spirit. Since crops can be stored, and since it takes less time to grow food in gardens than to find it in the jungle, agriculture gave us free time that hunter-gatherers never had. But free time is essential for creating art and enjoying it. Ultimately it was agriculture that, as its greatest gift, enabled us to build the Parthenon and compose the B Minor Mass."

Jared Diamond; *The Rise and Fall of the Third Chimpanzee*, 1991, p.164.

⁸ Venice Biennale 1995.

globalisation that we adapt to an ever more unpredictable world. Observing this aspect of the human condition within Orta's work architect/writer Paul Virilio states, 'That any human situation is precarious, regardless of the safeguards we may put in place or believe in.'⁹

I sense the insecurity Virilio refers to within these objects that act as protection against the economic and natural environment. While researching her practice I have discovered reference to her work being used during times of human upheaval:

They provided vital mobility and waterproof shelter for the Kurd refugee population; temporary protection and shelter for natural disasters such as the Kobe earthquake; mobile sleeping bags for the homeless; and immediate practical aides such as water reserves, integrated medical supplies and burial bags in an attempt to ameliorate the horrific hygiene problems of the Rwanda crisis.¹⁰

In Europe there is discussion on the affects of the third world encroaching on major capitals and borders breaking down, encouraging mass migration of the world's dispossessed to apparently greener pastures, toward a society with scant regard for those who fall behind.¹¹ Orta's work suggests to me a notion of reaching back to collectively pick up those that cannot keep up. Allowing them time to discover and create an identity, to rejoin the community at large, to establish human contact that is significant and to share in the resources of that community. As Orta's practice developed so did her ideas of the individual isolated from society as represented in the *Refuge Wear* series, 1992.

⁹ Ewen McDonald; *Personal Effects/The Collective Unconscious*, 1998 (no page number).

¹⁰ Studio Orta http://studioorta.free.fr/lucy_orta.html

¹¹ Behzad Yaghmaian, writing for *Counterpunch* draws attention to the plight of third world refugees who whether 'escaping poverty or political and social insecurity' have taken advantage of Europe's dissolving borders to escape their homelands; www.counterpunch.org/behzad0624.html



[Plate 3]

Refuge Wear-Survival Sac With Water Reserve Incorporated [Plate 3], part of this series, was designed with the principles of clothing and transport bags in mind and constructed from synthetic fibres that facilitate the shelter needs of the occupant. Aluminum coated polyamide is used to create the outer shell, rendering the shelter waterproof and breathable. Clear plastic pockets mounted on the outside of the *Survival Sac* store items such as food, water and personal artifacts. The sac converts from an anorak to a bivvy bag with the aid of a flexible carbon fibre sleeve that creates an arc like shelter, protecting the head from the elements. The bags are insulated with kapok¹² and encased in polyamide to protect from the cold.

Orta's work has evolved over time to represent different social situations; the individual alone in society, tending to their existence within the collective and the individual functioning with others to create a society. The collective offers

¹² The silky down which invests the seeds of several trees in the family Bombacaceae, used for stuffing pillows.

protection from threats known and unknown, the rationale behind coming together as a group along with companionship, shared food and shelter.

By 1994 and the production of *Collective Wear* [Plates 4, 5] we see the individuals coming together metaphorically, the objects connecting to one another with zips and velcro fasteners. Neighbours talking across the fence, helping someone you don't know to find their way. These modular shelters act individually and collectively to protect the occupants from environments beyond their body's restraints.



[Plate 4]



[Plate 5]

Orta's shelter clothing has parallels with the designs and materials used to construct outdoor survival gear. Mountaineers have used Bivvy bags when ascending peaks 'alpine style' where minimal shelter is carried. They are also used on Antarctic field trips and popular with outdoor enthusiasts concerned about carrying heavy loads. Sleeping in one makes me imagine what it would be like to be a giant pupa during the chrysalis stage.

Orta's work is about the basic human needs of shelter and sustenance rather than the unattainable desire of want. The psychologist Abraham Maslow writes

about this desire of want within his 'hierarchy of needs'.¹³ Once we attain our current want we then start looking for the next one, hoping satisfaction can be obtained. Orta's work avoids the representation of desire. Her work is a reaction to the outcome of society's collective wants. Instead she asks us to see the human need for shelter and community.

For homeless city inhabitants the situation of their physical and economic exposure is addressed by Orta's practice and the function of her work. It protects the body and it allows the isolated individual to be included in the community. These are not functions that rely on a site, rather a situation. She does not recognise cultural location as a pre-requisite for interaction with her work. Orta operates with situations, none of which have one location, as they are the circumstances of poverty and isolation created by humanity and our choice to embrace an agrarian society.

ANTONY GORMLEY–Beyond Dimension or Size Matters.

In the United Kingdom the allotment is a communal space. It's a place to grow a little extra food for the pantry—a hangover from Britain's wartime years and the experience of rationing. Rows of cabbages and carrots, a series of faceless tenement blocks, the architecturally marginalised area of a city. Viewed as a whole Antony Gormley's *Allotment*, 1996 [Plate 6] is communal and appears aesthetically uniform in mass, scale and hue until the smaller 'blocks' are noticed. Why the shift in scale? Is it an acknowledgement of the varying tiers of constructed habitat within the built environment? And what of the small windows? Are they allowing our vision and the surrounding atmosphere to enter the 'blocks' or are they there to precipitate internal interaction with the external world? The construction process of *Allotment* is based around a series of rules that utilise bodily measurements. Gormley compiled the dimensions of three hundred 'local' men, women and children of various age groups. Responding to

¹³ Patrick Jordan; *Designing Pleasurable Products*, 2000, p.4.

an interview question from Hans Anderson in 1996 Gormley explains the objective for the work:

It's important that the work results from an encounter with life: real lives registered through measurement, the intimacy of the body translated into the abstraction of numbers.¹⁴

The following measurements were taken:

In front

1. The total height from the top of the head to the ground.
2. From the shoulder to the ground.
3. From the shoulder to the top of the head.
4. The width of the head.
5. The height of the top of the ear from the top of the head.
6. The length of the ear.
7. The height of the mouth from the division of the lips.
8. The width of the mouth.
9. From side to side at the widest.
10. The height of the anus from the floor.

In Profile

11. From the back to the front at the deepest (i.e. from the buttocks to the toes).
12. The distance from the tip of the toes to the tip of the nose.
13. From the tip of the nose to the back of the head.
14. The distance from the back of the head to the back of the ear.
15. The distance from the side of the head to the side of the body.¹⁵

¹⁴ Antony Gormley; *Antony Gormley*, 2000, p. 148.



[Plate 6]

These measurements were then used to construct three hundred, fifty millimetre thick concrete rectangular objects. In much the same way as architectural walls are made, moulds were constructed using wooden shuttering into which cement was poured. Pre-determined rules were adhered to with the placement of the orifices. For example Gormley noted in the catalogue for the show at the Malmo Konsthall:

The mouth aperture will be square and based on the width of the mouth.
The mouth hole will be centered on the line of the lips¹⁶.

When exhibited at the Malmo Konsthall, Sweden in 1996 the 'blocks' were placed in a grid formation, facing in assorted directions with enough space between them for the viewer to pass. It was Gormley's desire that people view the work as a whole then interact with the individual 'blocks' at a more intimate level as proximity is the only tool the viewer has for disseminating what appears as uniformity. As much as there is uniformity of form and surface in the human body there is also obvious recognisable difference from person to person.

¹⁵ Antony Gormley; *Antony Gormley*, 2000, p. 144.

¹⁶ Antony Gormley; *Antony Gormley*, 2000, p. 144.

I cannot help but wonder what it would be like to be encased inside one of these concrete bodies. Is there one that I would fit into? The back of each 'block' is numbered allowing the original human template to recognise themselves amongst the uniformity of *Allotment*.



[Plate 7]

Fruit, 1991-1993 [Plate 7] is an abstraction of Gormley's huddled physical form—knees up, held close to the chest with his arms wrapped around himself, protecting the heart and other vital organs. Encased in cast iron and suspended from the ceiling with a steel hawser, *Fruit* could be Newton's apple, falling from the tree, reminding us that we are all subject to the forces of gravity. It presses onto us from every direction playing a part in our interactions with other bodies and keeping us bound to the earth. But Gormley's apple defies gravity and perhaps through the material choice of iron, the inevitable decay of organic life.

Both *Fruit* and *Allotment* were designed with the use of human dimensions, the former those of the artist and the latter that of various members of a community. With *Allotment* the decision to use selected measured dimensions creates its own form of abstraction. Whereas *Fruit* is an abstraction of the action of a human form, in this case it is the huddled figure of the artist. Through measuring the world we understand a portion of it. The ability to quantify and use materials has given creation to the structure of the human environment and the objects that exist within it.

I have chosen not to write about the more figurative work that makes up the bulk of Gormley's practice, as I do not wish to rely on his representational body casts, as it is less relevant to my research. That said, Gormley's sculpture is an endeavour at to literalise the experiences of the 'internal life' externally. They are an attempt to address what it is to be human, not a physical representation of us as organisms but what our place is in the world and how we interpret the experiences of our lives. Images of the body in contemporary culture move frantically, jump in and out of fashion, play at being props for products and interact with other bodies within the social milieu. Gormley's body casts and objects act as a contrast to these fashionable mediated images of the body. They are a place of stillness and silence.

Our bodies are protected and limited by the skin. The space within seems limitless, as if memory could go on forever, the outside world, by comparison has limitations for us as physical beings. The ocean stops us at the shoreline; gravity tempts us at the edge of a cliff. But within there are no limits. Referring to the inner space of the body in an interview for *Modern Painters* Gormley observes:

The fact is that we all live behind the skin. When we close our eyes we're in a space. It's a space of intimacy, of the most internal feelings and thoughts, some of which we share and some of which we don't. It's

also the collective condition-the collective space of the darkness of the body.¹⁷

Like our inner selves, protected by the epidermis and only open through the orifices, the internal space of Gormley's work appears unobtainable. Unlike the skin that can be cut or punctured Gormley's choices of concrete, cast iron and lead are impenetrable materials, not letting anything in or out. Their materiality is constant. The story of much of western figurative sculpture is one of manipulating intransient materials to suggest anatomical movement, the thoughts of great minds and in our country towns the memorial lone pine sentinels to wars past. Gormley, on the other hand is involved in instilling the movement, space and chaos of internal life into fixed matter. Gormley succeeds at making aesthetically different objects that address the same concerns, that being, what it is to be human.

MARTIN PURYEAR—I make therefore I am.

As a child growing up in Port Moresby I was exposed to many exotic sights: the open-air beach market at Goroke where pig heads were displayed on banana leaves; the tropical sky erupting during the afternoon thunderstorms of the wet season; the mud men of Lai and the drive-in cinema. Moresby was a long way from the Congo of Conrad's *Heart of Darkness* and even further from the suburban existence of Glen Waverley.¹⁸ The drive-in probably reminded mum and dad of home. But for myself, cavorting in the playground below the images on the giant screen, there were more subliminal responses developing.

As the seesaw reached its zenith I gazed up at Susan Sarandon's character, the wing walker, soaring high on *The Great Waldo Peppers* stunt plane.¹⁹ Snatched by the hand of gravity I watched her body fall, like Icarus plummeting to earth,

¹⁷ Antony Gormley; *Modern Painters*, Spring 2003, p. 22-25.

¹⁸ Joseph Conrad; *Heart of Darkness*, Penguin Modern Classics, 1973.

¹⁹ George Roy Hill; *The Great Waldo Pepper*, 1975.

but, unlike his wax and feathers, the technology that had taken her aloft remained there and later returned safely to terra firma. I sensed freedom on the lip of the wing and I felt the paranoia at its inability to protect the beauty that walked there. Would I still observe the world as an absurdist if I had not seen the coach, teetering on the cliff edge, loaded with gold bullion at one end and Michael Caine, with his gang of crooks at the other in the final scene of the *Italian Job*?²⁰

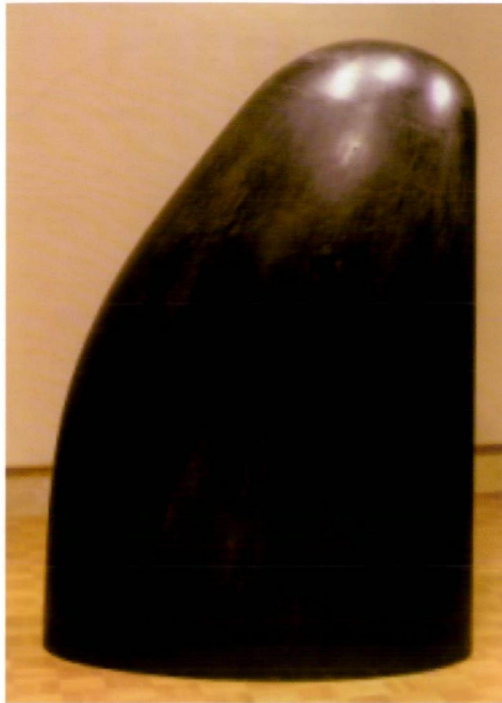
I don't see a difference between the process of making things and my own being. The relationship is inseparable. The psychologist James J Gibson in his discussion of the perceptual systems of the body refers to this relationship.

This equipment for feeling is anatomically the same equipment for doing. We can explore things with the eyes but not alter the environment; however we can both explore and alter the environment with the hands.²¹

The objects constructed within my research, though abstract in appearance come to represent a condition of reality. Within my practice flight, and that which gets you there – the wing – is a recurring theme. The understanding of what the wing represents has evolved while the motif reappears in another material or form. This theme appeared in my earlier ceramic work as freedom and uncertainty. More recently with *Flight of Expectation* [2003 Plate 12] it is an investigation of disbelief in disaster, based on a lack of understanding of how most technology operates, even though we rely on it so much.

²⁰ Peter Collinson; *The Italian Job*, 1969.

²¹ James J Gibson; *The Senses Considered as Perceptual Systems*, 1968, p.99.



[Plate 8]

The representation of experience in Puryear's work appears deliberately ambiguous. Is this an inevitable outcome of constructing forms based on the fundamental nature of one's own exposure to the world or evidence of distinct choices made through the deliberate tactic of extracting/abstracting from personal experience? *Self*, 1978 [Plate 8] is a black monolithic form 1725mm tall, constructed from painted cedar and mahogany. It curves down towards the floor appearing to punch through into the space below. Suggesting the possibility of not being restrained by its material rigidity. What first appears as solid mass turns out to be layers of material built up around a void. I get a sense of the space contained inside the form, pushing the skin outward, expanding and contracting like a lung. The work has been referred to as a self-portrait and Puryear has responded:

It is meant to be a visual notion of the self, rather than any particular self-the self as a secret entity, as a secret hidden place.²²

²² Enrique Juncosa; *Martin Puryear*, 1997, p. 22.

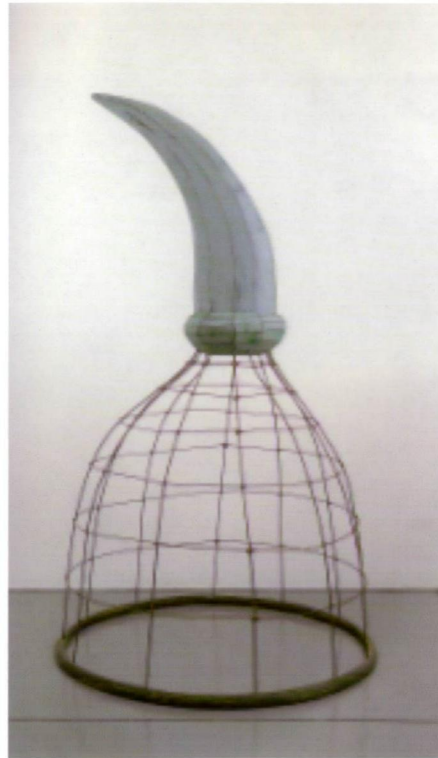
An object about the self, constructed using the skills gained by the making experience that shape both the individual and their creations.

It was at the Swedish Royal Academy where Martin Puryear was studying printmaking that he began to construct wooden objects. Realising his childhood impulses for building Puryear noted.

At a certain point I just put the building and the art impulses together. I decided that building was a legitimate way to make sculpture, that it wasn't necessary to work in the traditional methods of carving and casting.²³

If Puryear's construction process is indicative of building techniques then the visual outcome is either framework or cladding to create form. In the case of *Seer*, 1984 [Plate 9] a wire and wooden construction revealing the 'skin and bones' of the form, we see both. The surface is deliberately aged as if Puryear doesn't want to let it go until it can avoid the anonymity of newness. This weathering of the materials seems part of the formal concerns also. The 'spire' appears pushed to the side by an unfelt or seen wind. The wire structure, offering no resistance has escaped unscathed.

²³ Neal Benezra; *Martin Puryear*, 1993, p. 17.



[Plate 9]

Here there is not the traditional process of the sculptor, rather the builder with a bigger toolbox of techniques and a broader rack of materials. Committed to the physical activity of making his sculpture Puryear involves himself in every aspect of the making process. He discovered not just the accomplishment of the hand but the mind and soul working together, bringing personal knowledge to his work. We see the process of the joiner; the wheelwright, the cooper and patternmaker utilised as sculptural techniques. Puryear is a master of his material choices yet he recognises the limitations of his mastery, that craft can only be a means to an end. Thus the work is imbued with the artist's own being or experience, the obsession of construction and the individual nature of the prototype.

CHAPTER THREE

STUDIO PRACTICE– HOW THE WORK WAS PURSUED

The large multi-shaped heating conduits that weave through buildings, puncture the floors, vent into laneways and intersect privately behind pre-fabricated walls draw my attention. Researching how these ‘bits’ of the world are made and using some of those techniques and industrial aesthetics to construct my ‘bits’ of the world has been part of this project, alongside developing my ideas about adaptation and the combination of surface and form in object making. The material choices made, how they are utilised and the eventual insertion of these ‘bits’ into the world are approached pragmatically as problems to be solved.

I have always been fascinated by the constructed world, particularly the surface and form of that world. It’s an attraction to what Richard Deacon calls the ‘stuff of the world’.²⁴ The surface encourages a tactile response and the form a visual one. My visual empathy encourages the storage of construction techniques and forms. The shed wall Dad built out of a bay window that didn’t touch the ground, air conditioning ducting, tongue and groove floorboards, archways, boat and aeroplane design all stored waiting for my imagination to re-arrange and my hands to construct. The experience of the tactile is the need to feel this stuff – to run my hands over used surfaces and sense the stories of the people, who laboured over them, held within. I am interested in the human information that resides within materials. The longer I sand a wooden surface the more evidence of my activity can be sensed there, embedded through use. Through this repetition of activity the human condition of ‘I do, therefore I am’, is given life. Much like Ralph Macchio sanding a wooden fence in the *Karate Kid* and discovering defensive martial arts movements through repetitive activity, I feel this humanist activity can also be instilled within a sculptural object.²⁵

²⁴ Vikki Bell; *New World Order*, 1999, p. 35.

²⁵ John G. Avildsen; *The Karate Kid*, 1984.

Miroslav Balka, in talking about the nature of this recorded 'activity' residing within material said:

I was interested in the problem of the history of objects, in information that an old floorboard may contain. It is internal information never revealed to us until the last moment but appearing along with the floorboard itself.²⁶

My father would go away on business trips when I was a child. I used to imagine him walking the airport corridors, waiting for his plane to depart. On his return home there was a gift for me, a plastic model of an aeroplane, a boat or vehicle. These came as a kit; I cut the components off, followed the instructions provided and assembled the aeroplane or boat or car. I taught myself how to construct things from assembling plastic and wooden models. Now I draw the plan instead of following instructions. All the parts/components are fabricated then the model/sculpture is assembled. After making a couple of big objects I couldn't pull apart, I went back to the bits and pieces of models. Constructing large sculptures using a component system of making enables me to work self-sufficiently; they can be moved by myself, and transported in smaller sections to various destinations. It's a pragmatic response to scale. One aspect of the studio work was to teach myself or be taught new skills with the construction of each object. My sculpture is built much like a house or dwelling. A framework is put up then cladding of some description is attached to the framework or it is left unclad. The surface may be painted—or left bare.

MAKING THE BITS—A chronological list of the work constructed within the research project, questions asked and fingers broken.

²⁶ Tracey Warr, Amelia Jones; *The Artists Body*, 2000, p. 28.

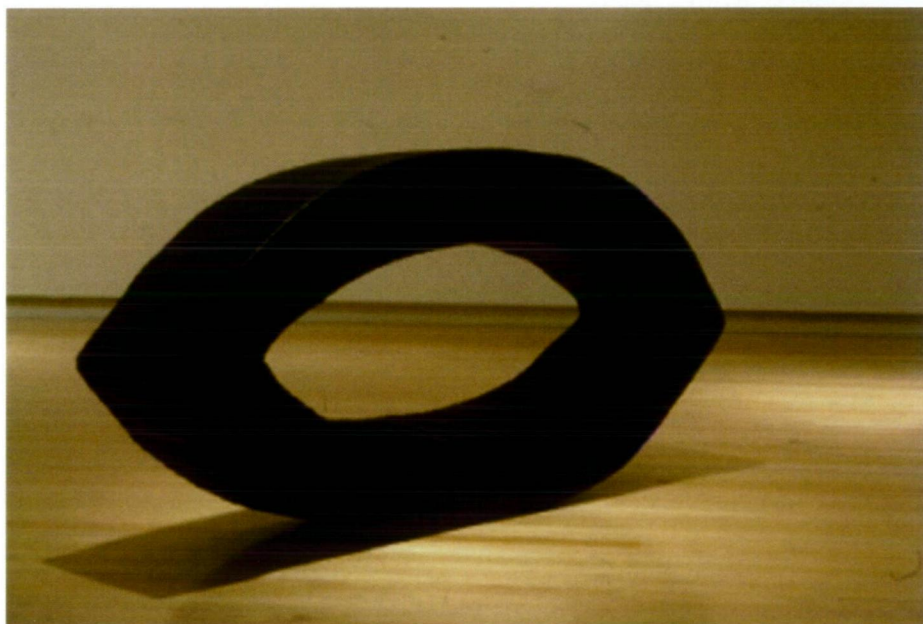
Initially the objects constructed within this research project were based on an investigation of form and surface. Specifically, trying to imply unity and function of surface treatment integral to the form of an object. From 1992-2000 I had a ceramics based studio practice. During this time I produced tableware and figurative sculpture. As a ceramicist this investigation was a primary concern for me when making forms and choosing glazes to match. A Peter Voulkos pot with a celadon glaze would look wrong, all that masculine manipulation of material swimming in a translucent iron green sea. The surface has to 'fit' the pot to be successful. This concern remains with me now as I make sculptures. The objects *Benefit*, *Navel* and *Unit* [2002 Plates 10, 11, 14] were concerned with this notion of 'glazing pots'. They became experiments for me as I formulated my ideas about human adaptation to the environment.

Navel, *Benefit* and *Unit* all evolved from a plan drawn for a large rubber object reminiscent of a sleeping bag. This plan included dimensions of 3000mm in length by 1900mm high tapering down to a base of 500mm. Realising my material choice (truck inner tubes) was going to be problematic I abandoned the idea. However I had made three elliptical steel frames, with the intention of using them for the 'sleeping bag'. I realised there was an opportunity to experiment with an aspect of my proposal, that being to investigate materials and construction techniques which reveal the making process and present form and surface as integral elements of an object.

NAVEL

The first object to be constructed during the research began where the last object of my Honours year finished. This new object, *Navel*, 2002 [Plate 10] was also made with a steel frame and covered in truck inner tubes. The construction technique was similar though the form varied. The object is an abstracted form not indicative of any particular shelter device, as later work within my research would be. Materially I wanted to test the limitations of the rubber I was using. How far I could stretch it over the framework and how that framework's geometry could be manipulated to reduce the overall weight of steel used. The

steel of the framework was welded together to construct two halves that were bolted at a point that would become the apexes of the ellipse. Separating of the halves was necessary as the inner tube would be pulled over the framework of what would later become an enclosed form. Strips were cut from the inner tubes approximately 70mm thick, softened in hot water then stretched onto the framework, each one overlapping the strip that had gone before. The sections of the frame close to the apex points were overloaded with strips allowing coverage of these areas once the halves were bolted together. The rubber surface was treated with a vinyl protectant to retard ultraviolet deterioration. This has been an aesthetic compromise based on material longevity, as without the surface treatment, the rubber had an ambiguous appearance that belies its lowbrow materiality.²⁷ With the application of the rubber strips over the form I saw the potential for addressing two of my research intentions. These were: how to reveal the process of making through material application/combination; and, by allowing the surface to indicate the form, would the viewer avoid differentiating between the two? I believe that upon scrutiny the process is revealed and the form of the object becomes as apparent as the surface.



[Plate 10]

²⁷ The talc coated surface of the inner tube has a faux slate or stone like appearance.

Limitless space is suggested and contained within a hollow skinned object. Unlike a bronze sculpture where mass is recognised. I do not wish to suggest weight or mass in my work. The construction and capture of space is an attempt to convey the space that exists inside all of us.²⁸

BENEFIT

As with *Navel*, *Benefit*, 2002 [Plate 11] was an extension of an earlier surface treatment onto a different form. There were not the material constraints of the rubber to consider so there was space to widen the framework allowing for the construction of a larger ellipse. As before the object was constructed in halves then joined together. Sassafras veneer was cut into strips 11mm wide by 100mm long and glued onto 3mm medium density fibreboard cladding that covered the steel framework. The strips were cut on a bandsaw using a simple jig to retain uniformity of size. The long hours at the saw were mindless but I enjoyed the repetitive process of producing the multiple components that would eventually spread out creating a layer to bind surface and form together. Later on in my research I would repeat this 'factory process' with the surface construction of *Vicissitude*. Through repetition of a multiple I intend to avoid the form and surface of the object being observed as separate elements. Like standing on a wooden floor, you view the plane and surface as one.

²⁸ That space which resides around the organs and bones and courses through our veins with the blood that runs our machine—the body.

eventually spread out creating a layer to bind surface and form together. Later on in my research I would repeat this 'factory process' with the surface construction of *Vicissitude*. Through repetition of a multiple I intend to avoid the form and surface of the object being observed as separate elements. Like standing on a wooden floor, you view the plane and surface as one.



[Plate 11]

Three lines of brads (small nails) were nailed into the veneer equal distances apart onto what would become the internal and external surfaces. With this application the surface suggests a utilitarian function, though not an obvious one and is reliant on the values of the observer. If a brad had been put in every piece of veneer the function would have become obvious, that of attaching surface to form. By avoiding an obvious function it is my intention to instill ambiguity that leads to various possibilities. Wood filler was used to fill the gaps between the veneers.²⁹ Initially the surface was left untreated as I saw this choice being an element of decoration that I wanted to avoid. As the veneer

²⁹ Years earlier I had employment as a timber floor restorer. The tactile and visual surface of floorboards has remained with me since, waiting for a form beyond the plane for it to occupy.

a surface element draws parallels with my research into layering the skin of the human body to protect from temperature changes.

At this point I wish to make a chronological digression and discuss an object that was being constructed at the same time as *Benefit* and finished before the last elliptical form (*Unit*) was begun. Unlike *Benefit* and *Navel* this object was not clad with a skin or surface. The construction of a framework revealed the form creating an outline as opposed to a mass. The reason for its particular design and construction lay in its title.

FLIGHT OF EXPECTATION (FOE)

Constructing *Flight of Expectation*, 2002 [Plate 12] began the pursuit of objects that are informed by Leonardo Da Vinci's statement that

The ancients called man the lesser world, and truly this expression is well founded, for as man is made up of earth, water, air and fire, this body is a resemblance to the earth.³⁰

In his book on Da Vinci, Bruno Santi interprets this observation of our resemblance to the world and argues that, 'Once the workings of human and natural organisms are known, they can be reproduced in machines which help man take his place in the world'³¹

These 'machines' are the built forms of architecture and the vehicles that extend us beyond our physical limitations protecting and sheltering us. They include aeroplanes, cars, boats and shelters that protect from an environment unaware of humanity's limited physiological range. These are constructed devices which are part of our external interactions yet utilize the biological blueprint of our internal existence. Did Da Vinci understand that a spacecraft could be a

³⁰ Bruno Santi; *Leonardo Da Vinci*, 1981, p. 41.

³¹ Bruno Santi; *Leonardo Da Vinci*, 1981, p. 43.

metaphorical body; within it contained all the necessities for life? Oxygen pumped through ducting like blood coursing through the veins; consumerables stored in cavities like nutrients held in the body's fatty tissues.



[Plate 12]

The 'machines' Da Vinci alludes to have been helping us take our 'place' and 'taking our place' since the industrial revolution. Robot assembly line workers construct cars on the Renault assembly line—the first car constructed without the touch of the human hand. On the big screen the replicants or 'skin jobs' in Ridley Scott's *Blade Runner*, were created to do the hazardous work in the off world colonies and this brings the idea of the perfect machine, a facsimile of ourselves, to life.³² But here these machines did not always benefit us. The Renault robots put skilled people out of work and the replicants turned on their masters asking for more life, more time to self realise before their incept dates expired. We have come to depend heavily on the machines we have made yet we mostly do not know how they function. It is this dependence on machines and the subsequent suspension of danger that allows me to get on an aeroplane. I assume and expect that a wing will not only support itself but also the vehicle

³² Ridley Scott; *Blade Runner*, 1982.

that it is attached to. Of course I realise there are accidents but I suspend the possibility when boarding – mouth dry.³³



[Plate 13]

Through an understanding of the body, Da Vinci saw the possibilities for creating machines of adaptation but he did not have the exposure to these machines to see their shortcomings. Looking at various modes of adaptation, which rely on the use of technology made me question my understanding of this modern device. At times I feel a great dependence on, yet little understanding of technology.

I began to make something that might not survive its own creation. The form was based on the framework of an aeroplane wing, as I imagined the design to be. The intention was that when the completed object was suspended it would bow under its own weight. The relationship of scale and weight to material choices could be questioned. Like a pre-Wright brothers design the material

³³ There is the hope that the mechanical or engineered elements of our civilization will work safely but planes fall out of the sky. Sometimes its human error or an unfortunate seagull, other times a piece of stuff just falls off.

choices I made were not based on any load bearing calculations. The 'stays' are twelve standard lengths of Tas-oak dowel scarfed together at the ends and painted with thinned bitumen. A template reminiscent of a solid compression rib from an aeroplane wing was cut out of medium density fibreboard then used to duplicate twenty-eight 'ribs' [Plate 13]. Six, sixteen millimetre diameter holes were drilled into each rib and then painted with bitumen. The surface was rubbed down using a wooden sur-form, affecting a history it did not yet have. *FOE* was deliberately aged to present what appears as outmoded equipment and a time of cogs and gears when technology did not speak in zeros and ones but implied function through appearance. This aesthetic is prevalent in my making process, be it material selection or decisions to artificially age surfaces. Within the research I have allowed rust to take over painted surfaces that have become chipped through use and watched the deterioration of surface from multiple handling. I have made a conscious choice with some of the objects not to repair this natural ageing, much as a machine ages with use so the objects show the effects of time and use as well.

When scarfed together the joined lengths of dowel are nearly six metres long. Twenty-six of the ribs were slid along the stays until evenly spaced. At each point where dowel intersected a rib it was nailed into position with a brad. Into the six holes of the two spare ribs sleeves made of pool siding were glued. The stays slid into these sleeves and were located there with a nut and bolt assembly. This would allow the wing to be cut into thirds then re-assembled when required.

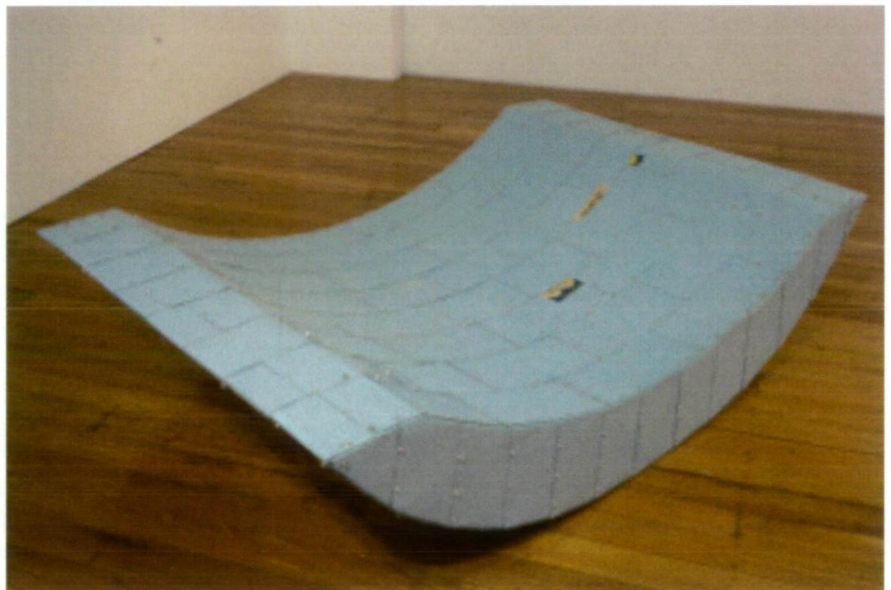
It appeared the object was under engineered. I could not say for sure whether it would survive the gravitational pull upon the materials once it was suspended. It creaked and groaned as it hung from four bound stainless steel cables, the middle sagging in a gentle arc toward the floor. The expectation that it would collapse under its own weight appeared unfounded. I had faith it would survive but no expectation of it doing so. I wanted to know how technology worked even if I didn't understand it. Like Icarus knowing he could fly, but climbing

too close to the sun and melting his wings, I was lost in the time of construction, not aware of the outcomes.

Having completed this piece I realised that adding a skin or surface to an object is a more difficult pursuit than constructing a form based on framework alone. Framework can exist as an aesthetic device to outline form and as a material entity to construct an object.

UNIT

With this in mind I returned to the last ellipse remaining to construct *Unit*, 2002 [Plate 14]. My intention being to construct an object where form and surface are integral to one another. That their relationship be 'necessary to a whole, complete and forming a whole.'³⁴



[Plate 14]

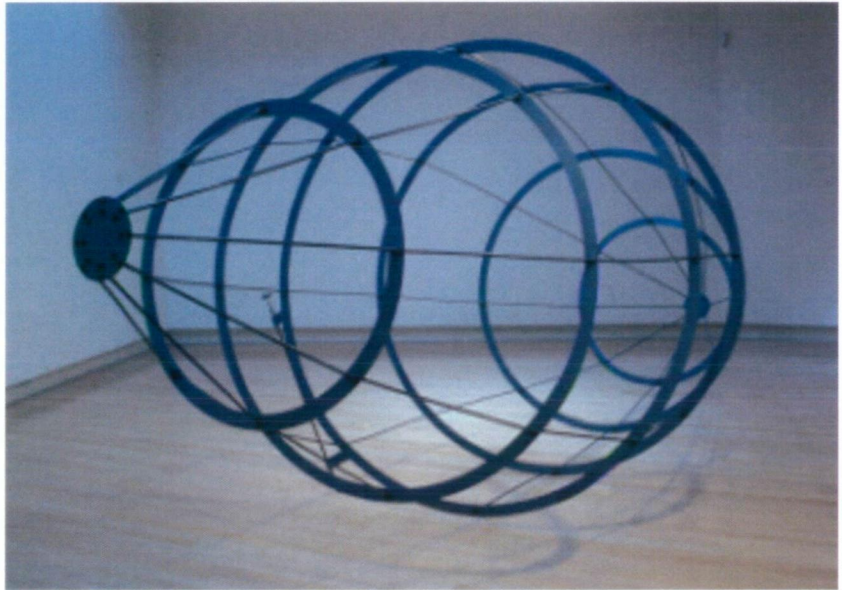
³⁴ J.B Sykes; *The Pocket Oxford Dictionary*, 1978, p.449.

When thinking of the skin that wraps around a wrist I realise there are bones, tendons and blood vessels beneath the surface but I picture this physiological concoction as a whole bound by the skin that surrounds and protects the internals.

I was seeking an integration of surface and form, where one would not appear incongruous to the other. As a visual tool I employed unitary choices for the surface, which would be constructed using eggshell blue pool siding and roofing screws. Experimenting with formal relationships between the two halves of the elliptical framework I decided on an outcome that ended up being a large half ellipse. The two sections of frame were placed side-by-side and welded together then clad in three-millimetre medium density fibreboard. Pool siding was cut into rectangular sheets using a bessa-brick as a template. This was a choice to represent a construction material and create an aesthetic uniformity on the surface. I wanted to see if the uniform nature of the surface construction would contribute to the form and surface of the object being seen as integral to one another. Although the template sizing is a background decision I believe these selective choices about material use build up to deliver the overall aesthetic qualities of the object. Roofing screws are a fastening device used for attaching corrugated roofing iron to a roof frame but for my purposes they were used to attach pool siding to medium density fibreboard. A pre-determined pattern was decided upon and the screws used to fasten the pool siding to the skin of fibreboard. The edges of the pool siding were overlapped, as corrugated iron on a roof would be. At some points of the curve the edge of the pool siding would lift from the form. At these locations a screw would be attached, regardless of the pre-determined pattern. This choice was made because the material and form of construction demanded a pragmatic response that is more akin to an engineering problem than a visual choice. The technique and problems of construction are not disguised from the viewer.

VESSEL

The Dictionary of Symbols refers to humanity's attraction to flight, particularly space flight as a desire to escape earthly problems.³⁵ At the edge of the stratosphere are the real estate packages that have avoided all housing and population booms, a place where no amount of protective insulation would help humans to survive. *Vessel*, 2002 [Plate 15] is the framework of an imagined vehicle that could exist in this place but where once Jules Verne lit a fuse now a microchip blips through zeros, ones and disasters.



[Plate 15]

Conceived as a drawing [Plate 16] I had visualised the object clad in perforated steel. What was initially an enclosed form became an open framework as the skin was discarded. The object is a disassembly of previous work as the surface is stripped away, revealing the framework that creates an outline of the object.³⁶

³⁵ Jean Chevalier, Alain Gheerbrant; *The Penguin Book of Symbols*, 1996, p. 393-394.

³⁶ I had a set of dimensional rules that I have stuck to for construction plans of objects. With the construction of *Navel* I changed the rules, or at least relaxed them. Still using my dimensions, but only as a starting point. Sometimes only using one, as in the case of *Vessel* were two of the rings have a 1900mm circumference.

locations through the washers that make up the ends of the stays that secure the rings together. These holes had to be in the same place on all the washers so the bolts could pass through the rings and connect to the next stay. The other jig consisted of two sliding pieces of timber with a metal plate attached to each. On these plates two notches located the pre-drilled washers. The stays were cut to length following the dimensional specifications of the CAD diagram and a washer welded onto each end. One piece of timber was slid along the bench to accommodate the varying lengths of the stays. This section also slid up and down the bench to create the angles of the stays. These angles create the curve of the object.

Like *Flight of Expectation* this object also sagged under its own weight when assembled. As if the material quality was labouring under the effort it takes to convince me of its structural integrity. *Vessel* has been assembled and disassembled a number of times now and the signs of this activity are evident through chipped paint and the early stages of surface oxidation. I have let this deterioration go un-hindered, as I do not wish to interfere with the signs of usage the object will acquire over time.

VICISSITUDE

I am attracted to working on surfaces in a labour intensive, repetitive fashion. Slowing the process of applying surface allows my mind to open up a meditative space where things can be discovered. The outcome being the process is prevalent within the content of the work.³⁷

My sleeping bag is a device of adaptation, it helps me avoid the cold while I sleep, something my physical form is not capable of doing by itself. My body will not adapt to the extremes of the Tasmanian environment without the aid of

³⁷ As a child I read *Charlie and the Chocolate Factory* by Roald Dahl. Charlie's father worked in a toothpaste factory screwing lids onto the filled tubes. At the time I imagined this to be a great career.

this device. *Vicissitude*, 2002-3 [Plate 17] shares characteristics with my sleeping bag. It has a negative space or element to it. This space is my shoulder width-500mm. They are both hollow forms. One contains goose down, the other a supportive framework, yet within both there is space. There was a conscious choice made with this form to leave the ends open-unlike my sleeping bag that zips closed. This enables the viewer more than one way into the work. I had been considering the idea of an inclusive space when constructing and realised this is hard to achieve with an object that has a skin. Because the interior of the objects came to be read as the interior of the self (namely mine which I wanted to avoid) I had to open them and allow access into this hidden space to show a frame, or air. These openings became the orifices of the objects, the accessible points, like our own body's orifices.



[Plate 17]

Vicissitude is an object I had to teach myself new skills to construct. I had a number of drawings but lacked the wood working skills required to build the form. These included a basic understanding of coopering to taper the internal walls down from a larger to a smaller opening, block laminating to construct the curved ends and steam bending, enabling the veneer to be attached to those curved ends.

The object was constructed from the inside out. The two identical internal walls were assembled from tapered lengths of pine. Veneer was glued and nailed down onto the surfaces before the walls were joined together with biscuits (internal joining device). The block-laminated forms were glued onto the ends of the internal walls. A framework of stays was then attached along the length of the object between the block-laminated forms that would allow plywood to be fastened down creating a skin. Upon this surface the Sassafras veneer was glued, stick-by-stick, nailed into place with brads, gaps filled with timber putty and coated with matt estapol. All of these exterior elements are integral to the function of the surface. Taking a month to complete this process of applying the surface to the object killed off any career aspiration to screw lids on toothpaste tubes.

VENT

‘Hole or opening allowing motion of air out of or into a confined space, give vent or free expression to.’³⁸

The title makes a literal connection with one of the object’s functions, the ability for air to pass through the structure. There is also an ambiguous connection to the act of indulging the imagination that through expression creates the object.

³⁸ Sykes J.B (editor); *The Pocket Oxford Dictionary*, Oxford University Press, 1978, p.1010.



[Plate 18]

The form of *Vent*, 2003 [Plate 18] is based on a hammock. A sleeping device originally used on ships that allowed sailors to adapt to the rocking of the vessel whilst they slept. This same design is now used in the construction of one-person outdoor bivvy bags. Suspended between two anchor points you can cook, sleep and survive protected from whatever the elements are up to.

As with the construction of *Vicissitude* there was a choice to open the object up to the viewer. *Vicissitude* had a negative space running through its length internally. This space though negative also appears integral to the object. Although earlier works in the research (*Benefit*, *Navel*) contained open space this was of a negative type not indicative to the object's construction.

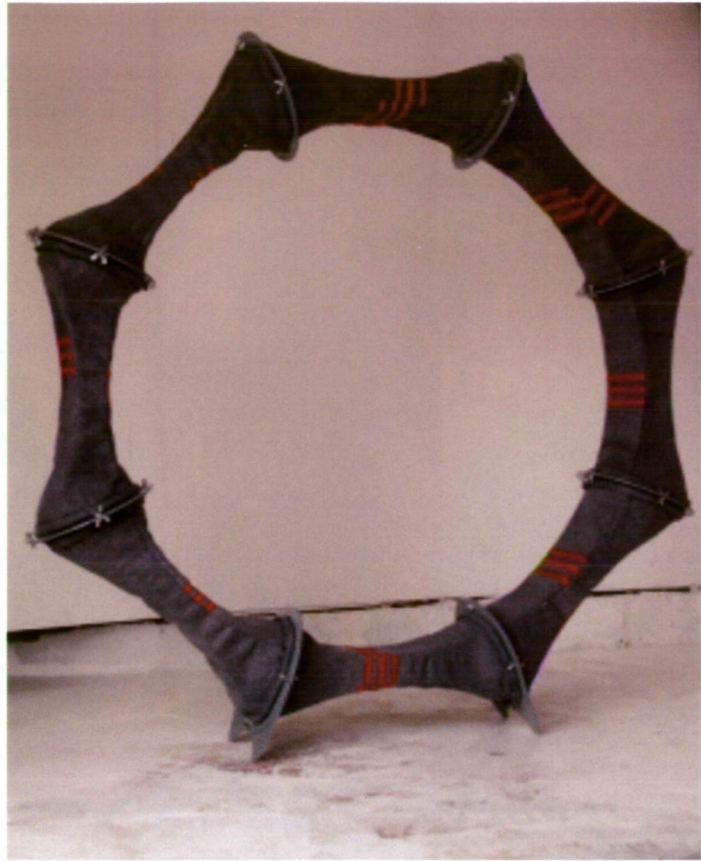
These earlier forms were 'skinned' over their entire surfaces whereas with *Vent* the skin was left open at either end revealing the framework. Through the elasticity of the rubber the steel of the framework is recognised. Much like veins rising to the surface of the skin during hot weather. This biological adaptation allows the body to cool the blood and help to maintain our core body temperature. The framework of the form is layered with truck inner tubes much as my response is to layer the body as the cold encroaches on me. Humans are waterproof but we don't retain thermal heat very efficiently. If the skin is

exposed to the elements, particularly wind, which literally blows the heat away, the core body temperature drops quickly and exposure sets in.

As *Vent* is based on the design of a hammock, tests with various hanging devices attached to the framework at either end were conducted. I experimented with bound cable that travelled in a straight line from the framework to the ceiling. Visually this failed as it became a distraction and was obviously not integral to the sculpture. Next came a hand sewn calico strap that broke under the weight of the object, breaking my hand in the process! Previously within the project I had experimented with mounting objects onto the wall as reliefs. I constructed a wall bracket that *Vent* could be hung on. I realised that for the successful adaptation of an object technology must be present and evolving with the idea. Whilst constructing *Vent* the hanging devices evolved as different technologies, albeit simple ones, were tested.

IDEAL

The final object constructed during the research *Ideal*, 2003 [Plate 19] had lived life as a drawing on the studio wall for a year and a half as I had not discovered the content or materials to render it real [Plate 20]. I found with other drawings that were created in a seemingly unconscious fashion that the content is discovered after drawing the form through various sources.



[Plate 19]

In relation to this object it was an image of Leonardo Da Vinci's *Vitruvian Man* [Plate 20] and a photograph from the Canberra Australian War Museum of a Carley life float that had been recovered after the sinking of HMAS Sydney off the West Australian coast during World War Two [Plate 21]. There has been much written about the loss of the HMAS Sydney to the German raider Kormoran. It is a mystery how all hands were lost to the smaller German boat. The remains of the Sydney have not been located though two Carley life floats were discovered after the sinking, adrift near Christmas Island; one with the still unidentified remains of a sailor on board. The other float is on display in the Canberra Australian War Museum. After seeing the image of the Carley float and considering the plight of the individual whose body was found on board I was driven to construct an object using the furthest reaches of my dimensions. An object that denoted absence of form yet was constructed (at least like a lifeboat) to house a physical body. Adrift, uncertain, looking for land, a lifeboat can carry the occupant to the furthest geographical location. It is a

small boat attached to the outside of a larger boat. A rescue device, a shelter from the sea and the disaster it is escaping. It has room for one, a few or many. They can be cocoon like, or open to the elements. Sometimes they are lowered on a cable; at other times they are propelled down a chute with no time to spare. Wherever we go and whatever we choose to travel in, we always need a lifeboat. Metaphorically it can be a parachute, a car airbag or an island adrift on the sea, its occupants staring outwards in the hope of sighting land.



[Plate 20]

The circumference of *Ideal* was decided upon by measuring the space I inhabit when my arms and legs are stretched out 'star like' as the *Vitruvian Man* is. This drawing of Da Vinci's has been referred to as a 'study of relationships and proportions'.³⁹ The relationship to my own thoughts on extending my dimensions beyond my physical restraints is manifested in the scale of the object. I chose to set the edge of the object using the furthest points of my outstretched hands and feet. An attempt to reach beyond myself as much as the landmass sought is temporarily beyond the traveller in their lifeboat. Although Da Vinci's drawing and the lifeboat seemed incongruous they came together within the work conceptually to realise my ideas about the extension of my

³⁹ Bruno Santi; *Leonardo Da Vinci*, 1981, p.40.

dimensions as a design tool to create objects that represent devices of adaptation.



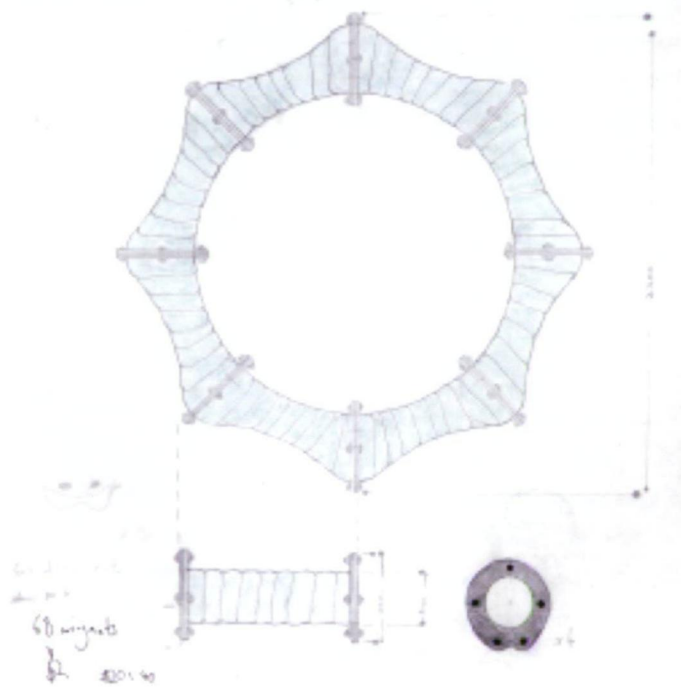
[Plate 21]

Amongst reports written into the loss of the Sydney there is an investigation from which I recorded the construction techniques of the lifeboat.⁴⁰ The plans of the Carley float supplied me with material direction and a construction technique. These included referencing the cylindrical buoyancy chambers of the float; the canvas wrapping that protected the chambers and the marine grey paint it was finished with. I refined my original drawing with these observations in mind and then used that drawing [Plate 22] to plot a CAD diagram that would later be needed to calculate the radius of simple jigs and the CNC plasma cutting of metal components.

The connection rings were cut out using the CNC plasma cutter and four, twelve millimetre holes drilled through each. Using the original CAD drawing as a plan, lengths of steel rod were run through a metal roller, bent around jigs

⁴⁰ John Ashton; *The Scientific Investigation of a Carley Float*; 1993.

and welded into place between the rings creating a series of box-like curved compartments. The eight component sections were then coated with grey enamel paint. Imitating the original wrapping of the float I cut out a series of sixty millimetre wide strips of calico, seamed the edges and tightly circumnavigated two of the component sections of *Ideal*. Each strip was overlapped slightly by the proceeding strip creating a bandage like aesthetic. This surface material was sized with Bond Crete, shrinking the calico tighter onto the framework as had been done on the float to aid in waterproofing the surface. But I was not happy with the constrictive form the surface created so it was removed.



[Plate 22]

Looking for a material that had insulation properties (something that may have kept the lone survivor of the Sydney alive) I decided upon felt blankets. Using the framework as a pattern, sections of felt were traced, cut out and hand sown together using blanket stitch, a labour intensive process. Once again a pragmatic response to material guided the making process. Patches were applied over worn sections of material and to make the most of the material the felt panels were cut out as close as possible to one another, the end result being a chance positioning as to where the red striping sits on the form. Foam piping

was fitted into a series of felt 'socks' to formalise the edges. The wing nut fastening devices invest the object with a purposeful technique of assembly and an industrially obsolete visual aesthetic.⁴¹ By using my dimensions I made myself the measure for the object. As devices of adaptation extend the range of the body so too I have extended my dimensions as a design tool to move beyond limitations in scale encountered earlier in the research. I want to say I have found there is no ideal, only variance and within that uncertainty.

CHAPTER FOUR

CONCLUSION

Within the research, the making process and the skills I attained stimulated my formal enquiry. It was important to me that the principles of construction were evident within the sculptures. I progressed through the making of each object, testing materials in relation to surface and form, with the intention of creating an integral relationship between these two main elements of the sculptures. During construction of the objects I have considered the space they would eventually occupy and made design choices to accommodate this. As the nature of the research has been one of experimentation, the completed objects appear as prototypes, which due to their nature will lead to further development of my ideas. Forms have been assembled from the inside out. One of my future intentions is to reverse this process of construction, to expose the framework, bring it out from under the cladding and situate it on the form externally. This may mean beginning with a material mass as opposed to a framework.

⁴¹ The advent of hand power tools in construction means the Hex nut and Allen key system, and the economics of production (casting is expensive) has relegated the Wing nut to another industrial time.

The objects constructed within the research have been abstracted from various shelters and vehicles. These have all been transportable or an aid thereof. It is my intention to now investigate 'devices of adaptation' that exist as permanent fixtures in the environment such as the suspension bridges and constructed tracks that exist in Tasmania's wilderness areas. These devices have a semi-permanent presence in the landscape, yet facilitate human adaptation to environment. I believe my intention to evoke possible shelters has been realized through choices made regarding the negative space of the objects, a space that a body could occupy. This is most obvious in the sculptures *Navel*, *Benefit* and *Vicissitude* and indicated through the scale of *Vessel* and *Ideal*, a scale that is of the body.

It was inevitable that by the end of this research project I would use a material with insulation properties more akin to human use; the felt used to cover the framework of *Ideal*. Timber and rubber have some insulation properties but are not usually associated with proximity to the skin. If I needed metaphorical rescuing then the felt had become like Beuys's fur, the material that could insulate my body from the cold and preserve me for another day.

By understanding our physiology we begin to understand our limitations. From this knowledge we can use various materials to overcome these restrictions. This research project has been concerned with visualizing the material constructions that allow us to extend the body beyond its physiological confinements.

As I look up at the summit of Mt Wellington grey rain clouds are visible. There is a chilled breeze blowing off the water down here so it will be at least ten degrees colder on the summit. If I were there now I would be inside a tent, wrapped in my sleeping bag, stirring lunch as it bubbled away on the stove, hoping the weather would clear soon.

APPENDICES

LIST OF ILLUSTRATIONS

PLATE 1: Ben Booth, *AVERAGE LOT* 2001 salt, sassafras, brads, particleboard. 190/50/24cm.

PLATE 2: Ben Booth, *SHELL* 2001 pool siding, pop-rivets. 190/45/190cm.

PLATE 3: Lucy Orta, *REFUGE WEAR SURVIVAL SAC WITH WATER RESERVE INCORPORATED* 1996 materials not listed, dimensions variable. McDonald Ewen, Virilio Paul, *Personal Effects/ The Collective Unconscious*; MCA, 11 July-6 September 1998.

PLATES 4, 5: Lucy Orta, *COLLECTIVE SURVIVAL SAC* No date listed in catalogue, materials not listed, dimensions variable. McDonald Ewen, Virilio Paul, *Personal Effects/ The Collective Unconscious*; MCA, 11 July-6 September 1998.

PLATE 6: Antony Gormley, *ALLOTMENT* 1995 reinforced concrete 112 units' dimensions variable. www.antonygormley.com

PLATE 7: Antony Gormley, *FRUIT* 1991-3 cast iron, air. 104/125/120cm. www.antonygormley.com

PLATE 8: Martin Puryear, *SELF* 1978 poly-chromed red cedar and mahogany. 175/22/64cm. Martin Puryear; Fundacion "la Caixa", Barcelona, 1997 p55.

PLATE 9: Martin Puryear, *SEER* 1984 water based paint, wood, wire. 198/132/114cm. Martin Puryear; Fundacion "la Caixa", Barcelona, 1997 p.79.

PLATE 10: Ben Booth *NAVEL* 2002 rubber, steel. 86/36/190cm.

PLATE 11: Ben Booth, *BENEFIT* 2002 sassafras, brads, medium density fibreboard, steel. 93/64/190cm.

PLATES 12, 13: Ben Booth, *FLIGHT OF EXPECTATION* 2002 tas-oak, medium density fibreboard, hydro-seal, cable and fixtures. 28/660/69cm.

PLATE 14: Ben Booth, *UNIT* 2002 pool siding, roof screws, medium density fibreboard, steel. 33/190/130cm.

PLATES 15, 16: Ben Booth, *VESSEL* 2002 steel, paint. 190/190/600cm.

PLATE 17: Ben Booth, *VICISSITUDE* 2002-3 sassafras, brads, flexi-ply. 40/60/216cm.

PLATE 18: Ben Booth, *VENT* 2003 rubber, steel, paint. 480/380/26.

PLATES 19, 22: Ben Booth, *IDEAL* 2003 steel, felt, paint, wing nuts. 210/210/37cm.

PLATE 20: Leonardo Da Vinci, *VITRUVIUN MAN* Santi Bruno, Leonardo Da Vinci; Scala Books, 1981, p. 41.

PLATE 21: *CARLEY LIFE FLOAT:* Luck Peter, Australian Icons - Things that make us what we are; William Heinemann Australia, 1992, p. 144.

BIBLIOGRAPHY

- AUTHOR-MY, *What Do We Use For Lifeboats When The Ship Goes Down?*; Harper Collins, 1976.
- CHEVALIER Jean, Alain Gheerbrant, *The Penguin Book Of Symbols*; Penguin Books, 1996.
- GIBSON James, *The Senses Considered*; Allan And Unwin, 1968.
- HALL Edward T., *The Hidden Dimension*; Doubleday And Company, 1969.
- HUGHES Robert, *Nothing If Not Critical*; Collins Harvill, 1990.
- HUTCHINSON John, E.H. Gombrich, Lela B. Njatin, Antony Gormley, *Antony Gormley*; Phaidon Press Limited, 1995.
- KRAUSS Rosalind E., *Passages In Modern Sculpture*; Mit Press, 1985.
- KRAUSS Rosalind E., *The Originality Of The Avant-Garde And Other Modernist Myths*; Mit Press, 1986.
- LUCK Peter, *Australian Icons; Things That Make Us What We Are*, William Heinemann, 1992.
- MAUSS Marcel, *Sociology And Psychology, Essays*; Routledge And Kegan Paul Limited, 1979.
- MCDONALD Ewen, Paul Virilio, *Personal Effects/The Collective Unconscious*, Mca, 1998.
- NO AUTHOR, *Leonardo Da Vinci*; Instituto Geografico De Agostini, 1956.
- NO AUTHOR, *Shelter*; Schockenbooks, 1973.
- PATRICK Jordan, *Designing Pleasurable Products*; Taylor And Francis, 2000.
- ROBERTS David (Editor), *Points Unknown*; Norton & Company, 2002.

SANTI Bruno, *Leonardo Da Vinci*; Scala Books, 1981.

SAUL John Ralston, *On Equilibrium*; Penguin Books, 2001.

SCHNECKENBURGER Manfred, *Art Of The Twentieth Century*; Taschen, 2000.

SEBALD W.G., *The Rings Of Saturn*; Vito Von Eichbom Verlag, 1995.

STUART Morgan, *Transformations New Sculpture From Britain*; The British Council, 1983.

THOMPSON J, On Pier Luigi Tazzi, S Peter Chjeldahl, Penelope Curtis; *Richard Deacon*, Phaidon Press Limited, 2000.

TUCKER William, *The Language Of Sculpture*; Thames And Hudson Limited, 1977.

VERGINE Lea, *Body Art And Performance; The Body As Language*, Skira Editore, 2000.

WARR Tracey, Amelia Jones, *The Artists Body*; Phaidon Press, Limited 2000.

WEB REFERENCES

URL http://anthro.palomar.edu/adapt/adapt_2.htm 11/8/03

URL www.counterpunch.org/behzad0624.html 15/12/03

URL www.antonygormley.com 18/6/03

URL

<http://www.rottentomatoes.com/m/TheGreatWaldoPepper-100884/reviews.php> 17/10/03

URL <http://scribble.com/uwi/br/off-world.html> 17/10/03

URL <http://www.imdb.com/title/tt0064505/> 17/10/03

URL <http://www.fast-rewind.com/kkid/> 17/10/03

URL

http://studioorta.free.fr/lucy_orta/works_mod_archi.html

29/8/03

URL

<http://weboflife.ksc.nasa.gov/currentResearch/currentResearchGerera>

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